

REMARKS

Claim 1 has been amended by incorporating subject matter from claims 9 and 13 into it to specify the presence of polyethyleneimine(s) in specified concentration ranges, with an upper limit of 1%. (See also, page 11, lines 20-26 of the present application).

Claim 13 has been amended to specify a new concentration range for the polyethyleneimine(s). (See, page 11, lines 20-26 of the present application).

Claims 7-9 and 18 have been canceled.

Claims 10-13 and 19 have been amended to conform to claim 1 as amended.

Claims 1-6, 10-17, 19-21 and 24-29 are currently pending.

The Office Action rejected claims 1-6, 8, 9, 13-17, 20, 21 and 24-29 under 35 U.S.C. § 103 as obvious over U.S. patent application publication no. 2003/0108501 (“Hofrichter”); claims 1-21 and 24-29 under 35 U.S.C. § 103 as obvious over U.S. patent 5,955,415 (“Gutierrez”); and claims 7, 10-12 and 18 under 35 U.S.C. § 103 as obvious over Hofrichter in view of Gutierrez. In view of the following comments, Applicants respectfully request reconsideration and withdrawal of these rejections.

The pending claims are directed to compositions containing a specified type of imine compound (polyethyleneimine) in a specified concentration (0.0005%-1%). The compositions further contain calcium carbonate in specified amounts – the amount of calcium carbonate present is dictated by the fact that at least half or more of the solid mineral particles are calcium carbonate, and the solid particles are present in an amount sufficient to satisfy the polyethyleneimine/solid particle ratio required by the claims. Thus, the claims are directed to compositions containing two specified

ingredients (a polyethyleneimine and a calcium carbonate) in narrow, specified ranges. The applied art neither teaches nor suggests this specific invention, or any of the benefits associated with such a specific, optimized invention.

In Applicants' previous response, Applicants cited *In re Whalen* to support their position that the applied art does not render obvious the specific, optimized invention of the present application. In *Whalen*, the Board noted that "while discovery of an optimum value of a variable in a normal process is normally obvious, this is not always the case. ***One exception to the rule is where the parameter optimized was not recognized in the prior art as one that would affect the results.***" (emphasis added). The Board explained that, in *Whalen*, the Examiner had not pointed to any teaching in the cited references, or had not provided any reasoning based on scientific reasoning, that would support the conclusion that it would have been obvious to optimize the prior art compositions in the inventive manner required by the claims.

In response to Applicant's reliance upon *Whalen*, the Office asserted that "Hofrichter and Gutierrez clearly teaches the use of PEI in combination of calcium carbonate in the specific amounts as recited by the instant claims." (Office Action at pages 8-9). However, the Office did not cite to any disclosure in the applied art where sufficient specificity is provided, nor did the Office provide any scientific reasoning to support its conclusion.

To the contrary, the Office recognized earlier in the Office Action that neither Hofrichter nor Gutierrez provides the required specificity. Specifically, the Office stated that neither Hofrichter nor Gutierrez teaches, "with sufficient specificity, a

composition or method of using such a composition to clean/condition hair containing solid mineral particles, at least one polyalkyleneimine, and the other requisite components of the composition in the specific proportions as recited by the instant claims.” (Office Action at page 5 (for Hofrichter) and at page 6 (for Gutierrez)).

Thus, the Office has not provided any evidence or scientific reasoning to support its conclusion that the applied art teaches using the specified compounds in the specified amounts and, in fact, has recognized that the applied art does not teach such subject matter.

Following *Whalen*, it is clear that the applied art does not render obvious the claimed compositions having the specified ratios of the required ingredients, the result of which is an improved hair composition. None of the applied art teaches, suggests or recognizes the importance of having the specified ingredients in the specified ratios, or the beneficial effect that such ingredients in such ratios would have on hair compositions. Applicants made this discovery. In the words of *Whalen*, because the applied art does not recognize that including the required particles and the required polyethyleneimine compounds in the required ratios affects the properties of a hair composition, the specified ratios are not parameters that can be “optimized” under the law.

Accordingly, and for at least the above reasons, no *prima facie* case of obviousness exists in the present case.

Furthermore, Applicants have submitted sufficient evidence of unexpected results associated with the claimed invention to overcome the pending obviousness rejections. This evidence is tailored to the narrow scope of the pending claims, and

demonstrates that the specified compounds in the specified amounts results in improved products.

The first Rule 132 declaration demonstrates that compositions containing slightly above the minimum required polyethyleneimine/mineral particle (calcium carbonate) weight ratio (0.0027) possess improved smoothness properties. The declaration also demonstrates that compositions containing polyethyleneimine/mineral particle (calcium carbonate) in a ratio falling outside the claimed ratio (0.1667) do not possess such improved smoothness properties.

The second Rule 132 declaration further demonstrates that compositions containing the required polyethyleneimine/mineral particle (calcium carbonate) weight ratio (0.005 and 0.0031) possess improved smoothness properties. The declaration also demonstrates that compositions containing polyethyleneimine/mineral particle (calcium carbonate) in a ratio falling outside the claimed ratio (0.16) do not possess such improved properties.

The third Rule 132 declaration further demonstrates that compositions containing the required polyethyleneimine/mineral particle (calcium carbonate) weight ratio (0.04) possess improved smoothness properties. The declaration also demonstrates that compositions containing polyethyleneimine/mineral particle (calcium carbonate) in a ratio falling outside the claimed ratio (0.16) do not possess such improved properties.

The claimed invention requires the polyethyleneimine/mineral particle weight ratio to be 0.05-0.001. The significance of the required polyethyleneimine/mineral particle weight ratio is amply demonstrated by the Rule 132 declarations in this case.

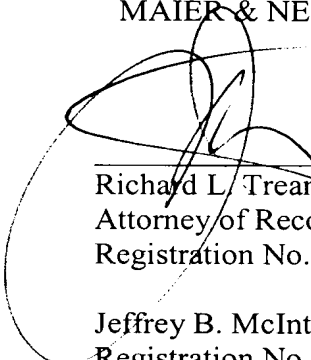
The declarations demonstrate that compositions containing the required polyethyleneimine/mineral particle weight ratio possess improved smoothness properties. The declarations also demonstrate that compositions containing polyethyleneimine/mineral particle in a ratio falling outside the claimed ratio do not possess such improved smoothness properties. The required elements are result effective, and they result in compositions having improved properties as demonstrated above. Accordingly, the applied art cannot render obvious the present invention.

For all of the above reasons, Applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. §103.

Applicants believe that the present application is in condition for allowance. Prompt and favorable consideration is earnestly solicited.

Respectfully submitted,

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